

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): David Griffith  
Title: ACTUARY MANIPUTABLE RATING MODEL AND SYSTEM  
Application No.: 09/775,019 Filed: February 1, 2001  
Examiner: Natalie Pass Group Art Unit: 3626  
Atty. Docket No.: 027-0001 Confirmation No.: 7486

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March 19, 2007

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**REPLY BRIEF (37 C.F.R. § 41.41)**

This brief is in furtherance of the Notice of Appeal, filed on July 3, 2006 and is responsive to Examiner's Answer (mailed January 17, 2007), which sets a deadline of March 19, 2007 for reply (March 17, 2007 being a Saturday). A separate paper captioned "Request for Oral Hearing" accompanies this Reply Brief. Applicable fees (if any) are provided with the accompanying electronic or printed transmittal.

**REAL PARTY IN INTEREST**

*See* Appeal Brief, filed September 21, 2006.

**RELATED APPEALS AND INTERFERENCES**

*See* Appeal Brief, filed September 21, 2006.

**STATUS OF CLAIMS**

Claims 3-15 and 19-21 and 24 are presented herein on appeal and, for convenience of the Board, are reproduced in the Appendix attached hereto.

**STATUS OF AMENDMENTS**

Applicant's amendment after appeal has been entered.

**SUMMARY OF CLAIMED SUBJECT MATTER**

See Appeal Brief, filed September 21, 2006.

**GROUND S OF REJECTION TO BE REVIEWED ON APPEAL**

See Appeal Brief, filed September 21, 2006.

**ARGUMENT**

Claims 3-15 and 19-21 and 24 remain finally rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent Publication No. 2002/0046064, naming Maury et al. (hereinafter "*Maury*"). As detailed in the Appeal Brief, those rejections are simply not sustainable on appeal. Indeed, the Office's final rejection should be reversed for at least the following reasons:

1. **ERROR 1:** *Maury* does not disclose that which the Office attributes to it. Accordingly, no *prima facie* case of obviousness exists.
2. **ERROR 2:** Even if *Maury* did disclose that which the Office attributes to it, *Maury* is *not prior* to Applicant's filing date. Because elements of the *Maury* disclosure relied upon by the Office in its rejection of claims do not appear in the provisional application to which *Maury* claims priority, *Maury's* effective date as a reference against Applicants claims is no earlier than May 18, 2001 (over 4 months after Applicant's filing date). Because *Maury* is not "prior," no *prima facie* case of obviousness exists.

Applicant has briefed its positions relative to ***ERRORS 1*** and ***2*** in the Appeal Brief, and does not restate its positions here. Rather, Applicant respectfully directs this honorable Board to that previously-filed Appeal Brief and restricts arguments herein to additional errors suggested by the Examiner's Answer.

3. **ERROR 3 (Correspondence between Applicant's Disclosure and that of *Maury* does not itself Create a Prima Facie Case of Obviousness):**

The Office apparently misunderstands the relation between prior art disclosure (alleged) and subject matter of the present application, which would be necessary to

sustain a finding of obviousness. While the law requires correspondence between Applicant's *claims* and specific disclosure of the prior art, the Office oddly seeks to base its position on an alleged correspondence between Applicant's *specification* and the relied upon art (*Maury*). In particular, the Office responds (*see* Examiner's Answer, pp. 14-15) to Applicant's arguments with a compendium of quotations from Applicant's specification (Answer, pp. 14-15) and a listing of allegedly corresponding quotes from *Maury* (Examiner's Answer, pp. 16-17) and/or interpretations thereof. Although the Office peppers its analysis with conclusory interpretations of phrases that vaguely approximate claim language, the Office's analysis is clearly premised on the faulty proposition that correspondence of *disclosure* creates a *prima facie* case of obviousness.

***Such analysis is clear legal error and, to the extent that the Office's conclusion of obviousness is in any way based on such legal error, it must be reversed.***

4. **ERROR 4 (Mere Correspondence of some Disclosure of Maury with that of the Provisional Application does not Establish an Earlier Effective Reference Date):**

As before, the Office fails to identify specific disclosure that exists in *both Maury and* the provisional application to which *Maury* claims priority, and which is sufficient to render Applicant's *claims* obvious. Apparently, in lieu of such identification, the Office assembles (*see* dual citations in Examiner's Answer, pp. 16-25) a long list of features that are allegedly common to *Maury* and the provisional application to which *Maury* claims priority. With all due respect, the common disclosure alleged by the Office has little (if anything) to do with Applicant's claims. Accordingly, the issue before this honorable Board is not whether some correspondence exists between respective disclosures of *Maury* and the provisional application to which *Maury* claims priority, but rather whether both *Maury* and the provisional application to which *Maury* claims priority disclose a particular system in sufficient detail to render Applicant's claims obvious. Absent of corresponding claim-invalidating disclosure in both *Maury* and the provisional application to which *Maury* claims priority, *Maury's* effective date is not prior to Applicant's filing date.

In responding to Applicant's argument (*see* Appeal Brief, pp. 11-12) regarding absence of teaching alleged by the Office to be "well known in the art," the Office launches into a convoluted recitation of quotations/interpretations related to "Applicative Real-Time Programming," Oracle databases and rapid display of web pages, which the Office argues appear in both *Maury* and the provisional application. Applicant respectfully notes that the recitation has nothing to do with the complained of absence of teaching alleged to be "well known in the art."

Similarly, in responding to Applicant's argument (*see* Appeal Brief, pp. 12-14) that no *prima facie* case of obviousness has been made out relative to claims 11, 13 and 19, the Office gives interpretations of *Maury's* teachings (*see* Examiner's Answer, pp. 20-21 [relative to claim 11], pp. 22-23 [relative to claim 13] and p. 24 [relative to claim 19]). As before, the Office's interpretations are simply unrelated to Applicant's claims. Accordingly, they do not advance the Office's necessary position that *Maury*

should be accorded an earlier effective reference date, relative to the subject matter claimed.

***To the extent that the Office's conclusion of obviousness is based on attribution (to Maury) of an effective filing date premised on correspondence of such unrelated disclosure, it must be reversed.***

5. **ERROR 5 (Certain Assertions by the Office regarding Content of Maury and the Provisional Simply Lack Factual Basis):**

In responding to Applicant's arguments that no *prima facie* case of obviousness has been made out, the Office attributes to *Maury* and to the application to which *Maury* claims priority, certain teachings (*see* Examiner's Answer, p. 21 [relative to claim 11], p. 23 [relative to claim 13] and p. 24 [relative to claim 19]) which are plainly not contained therein. In each case, the Office cites to:

"Maury's Figure 6 as well as in Maury Provisional, Attachment 'A,' pages 8 and 14 of 29, Attachment 'B,' pages 6 and 7 of 20, as well as Figures F and G."

Applicant has previously briefed (*see* Appeal Brief, pp. 12-14) specific limitations of claims 11, 13 and 19, which are clearly absent from *Maury* and the passages now relied upon by the Office do not change that fact. At best, *Maury* discloses (in the disclosure relied upon by the Office) communication of data from a front-end web-server to a back-end rating engine. *Maury* does not disclose any details of any of the respective transformations from an actuary-manipulable representation to an executable representation specifically recited in claim 11, 13 or 19. Applicant respectfully directs this honorable Board to the relied upon disclosure and requests a finding that the Office's assertions lack any factual basis.

***Since the Office's attribution of disclosure is baseless, conclusions of obviousness based thereon, must be reversed.***

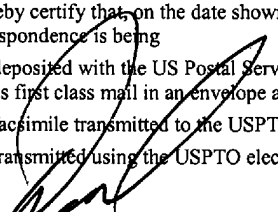
## **CONCLUSION**

For the foregoing reasons as well as those detailed in the Appeal Brief, the present rejections should be withdrawn and Applicant respectfully requests that this honorable Board reverse the rejections of claims 3-15 and 19-21 and 24 and to direct the claims of the present application to be issued forthwith.

**CERTIFICATE OF MAILING OR TRANSMISSION**

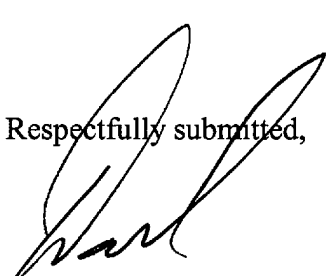
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\_\_\_\_\_  
David W. O'Brien

19-Mar-07  
\_\_\_\_\_  
Date

Respectfully submitted,

  
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**EXPRESS MAIL LABEL:** \_\_\_\_\_

**CLAIMS APPENDIX**

3. The method of claim 24,  
wherein the rating model defining is performed in accordance with a predefined document type definition.
4. The method of claim 24,  
wherein the transforming to the executable representation includes compilation of the actuary-manipulable representation to a platform independent executable form.
5. The method of claim 24, wherein the executable representation includes:  
predefined input and output interfaces;  
a runtime lookup facility for identification of runtime identifiers in the executable representation corresponding to ones of the variables; and  
a calculate method of the compiled rating model executable to generate the quote based on inputs supplied via the input interface.
6. The method of claim 5, further comprising:  
employing the runtime lookup facility to identify particular runtime identifiers corresponding to particular variables;  
setting values for the particular variables using the corresponding runtime identifiers and the predefined input interface; and  
retrieving the quote via the predefined output interface.
7. The method of claim 24,  
wherein the actuary-manipulable representation includes markup language encoded metadata.
8. The method of claim 24,  
wherein the actuary-manipulable representation is XML encoded.

9. The method of claim 24,  
wherein the actuarial-manipulable representation includes a graphical user interface  
presentation of the variables, factor tables and computational flows of the rating  
model based on markup language encoded metadata.
10. A method of preparing an executable representation of a rating model, the method  
comprising:  
defining an actuarial-manipulable representation of a rating model, the actuarial-  
manipulable representation including variables, factor tables and calculation  
sequences of the rating model, the factor tables having one or more axes bound to  
respective ones of the variables and the calculation sequences defined in terms of  
steps operative on values of the variables and cells of the factor tables;  
transforming the actuarial-manipulable representation to the executable representation, the  
executable representation including a runtime lookup facility for identification of  
runtime identifiers in the executable representation corresponding to ones of the  
variables and a calculate method executable to generate a quote based on inputs  
supplied via a predefined input interface.
11. The method of claim 10, wherein, for a particular calculation sequence of the  
actuarial-manipulable representation, the transforming includes:  
decomposing the particular calculation sequence into layers, each layer including those  
steps thereof that are at a same flow control level;  
for each layer, traversing the steps thereof to identify those of the variables used by the  
layer;  
for each layer, traversing the calculation sequence to identify the steps of the layer  
targeted by other steps of the calculation sequence and emitting code allocating  
storage for results of the targeted steps; and  
for each layer, emitting code for variable test and index calculations of the layer.
12. The method of claim 10, wherein the transforming includes:  
emitting, for a particular calculation sequence, both logged and non-logged versions of  
the executable representation.

13. The method of claim 10,  
wherein the transforming includes a two-step compilation,  
a first step thereof producing a platform independent source form from the actuary-manipulable representation, and  
a second step thereof producing the executable representation from the platform independent source form.
14. The method of claim 10,  
wherein the runtime lookup facility of the executable representation includes a predefined interface for obtaining the runtime identifiers corresponding to respective ones of the variables and factor tables of the rating model; and  
wherein the runtime identifiers allow client code to set and access runtime storage corresponding to respective ones of the variables and factor tables.
15. The method of claim 14,  
wherein the client code is part of a networked information service; and  
wherein the executable representation of the rating model is employed to prepare a quote for presentation by the networked information service.
19. A computer program product comprising:  
a compiled rating model corresponding to a calculation base including variables, factor tables and calculation sequences thereof, wherein one or more axes of the factor tables are bound to respective ones of the variables, and wherein the calculation sequences are defined in terms of steps operative on values of the variables and cells of the factor tables;  
a lookup facility to identify runtime identifiers corresponding to runtime instances of the variables;  
an input interface including access methods for setting values for the runtime instances of the variables using the corresponding runtime identifiers; and  
a calculate method of the compiled rating model executable to generate result of the calculation sequences based on the set values.



20. The computer program product of claim 19,  
wherein the runtime identifiers allow client code to employ the compiled rating model  
without knowledge of internals thereof.

21. The computer program product of claim 20,  
wherein the client code is a component of a networked information service; and  
wherein the networked information service sets values for the runtime instances of the  
variables and invokes the calculate method of the compiled rating model to  
generate a quote based thereon.

24. The method of claim 10, further comprising:  
executing the executable representation to calculate a quote for an insurance product.

**EVIDENCE APPENDIX**

There is no evidence submitted pursuant to 37 C.F.R. § 1.130, 1.131, or 1.132 or any other evidence entered by the examiner and relied upon by appellant in the appeal.

**RELATED APPEALS APPENDIX**

There are no decisions rendered by a court or the Board in any proceeding identified above in the Related Appeals and Interferences section.